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10/757,139	01/14/2004	Peter Ashwood Smith	16258ROUS01U	3823
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JOHN C. GORECKI, ESQ.			PARK, JUNG H	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

john@gorecki.us

## Office Action Summary

Application No.

10/757,139

Applicant(s)

SMITH, PETER ASHWOOD

Examiner

Jung Park

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Remark***

1. This communication is considered fully responsive to the Amendment filed on 11/13/2007.
  - a. An objection to the drawings is withdrawn since it has being amended accordingly.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the amended claims 1, 7, and 16, "an identity of a network element that initiated the link state advertisement" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the amended claims 1, 7, and 16, what is mean by "an identity of a network element that initiated the link state advertisement"?

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (US 2004/0174825, "Li").

**Regarding claim 1**, Li discloses a method of controlling the dissemination of routing information on a communication network, the method comprising the steps of:

- receiving a link state advertisement from the network (receive LSA message, see fig.2-4 and ¶.10);
- ascertaining distance information associated with at least one of the link state advertisement (LSA status, see fig.3-4, ¶.43, and ¶.45) and link state information contained in the link state advertisement (S within LSA message, see fig.3-4); and
- selectively forwarding the link state advertisement on the network (selectively forwarding according to LSA status, see ¶.34-35) based on the distance information without regard to an identity of a network element that initiated the link state

advertisement (based on S value which is not related with identify of a network element, see ¶.43 and ¶.45).

Regarding claim 2, Li discloses, "wherein the step of selectively forwarding comprises: forwarding the link state advertisement on the network (flooding LSA, see ¶.45) where the distance information indicates the link state advertisement is likely to be relevant to other nodes on the network (flooding within the radius of range, see ¶.45) and not forwarding the link state advertisement on the network where the distance information indicates the link state advertisement is not likely to be relevant to other nodes on the network (flooding only within a predetermined distance, see ¶.43 and ¶.45; also see ¶.36)."

Regarding claim 3, Li discloses, "wherein the step of selectively forwarding comprises: forwarding the link state advertisement on the network if the link state advertisement contained link state information that was relevant (flooding within the radius of range, see ¶.45), and not forwarding the link state advertisement on the network if the link state advertisement contained information that was not relevant (flooding only within a predetermined distance, see ¶.43 and ¶.45; also see ¶.36)."

Regarding claim 4, Li discloses, "wherein the step of ascertaining distance information comprises analyzing whether link state information contained in the link state advertisement is relevant (a predetermined distance, see ¶.43 and ¶.45)."

Regarding claim 5, Li discloses, "wherein the distance information is contained in the link state advertisement (TTL in LSA, see fig.4)."

Regarding claim 6, Li discloses, "wherein the distance information is measured by the sum of link costs (TTL is a number of hops, see ¶.45)."

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li.

**Regarding claim 16**, it is a claim corresponding to claim 1, except the limitations of "control logic (inherent to have a control logic to control OSPF protocol in ¶.6 and for the functions in ¶.43-45)" and "if the distance information exceeds a predetermined metric (a predefined distance using a radius of the flooding range, see ¶.43 and ¶.45).

Li does not explicitly disclose "selectively dropping the link state advertisement". However, Li discloses that LSA is distributed to the communication nodes located within a predefined distance from the LSA originator node. That is, LSA is dropped at communication nodes not within the predefined distance. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the LSA dropping method not within a predefined distance for the purpose of preventing useless packets from being flooded in valuable communication networks.

Regarding claim 17, it is a claim corresponding to the ascertain step rejected claim 1 and is therefore rejected for the similar reasons set forth in the rejection of claim 1.

Regarding claim 18, it is a claim corresponding to claim 6 and is therefore rejected for the similar reasons set forth in the rejection of claim 6.

Regarding claim 19, Li discloses, "further comprising a routing table (database, ¶.2), and wherein the logic further configured to update information in the routing table (update, see ¶.2) from link state information contained in the link state advertisement (LSA, see ¶.2) if the information is determined to be relevant (¶.34-35)."

Regarding claim 20, Li discloses, " further comprising a routing table (database, ¶.2) and wherein the control logic is further configured to update information in the routing table from link state information contained in the link state advertisement (update & LSA, see ¶.2), and wherein the control logic is configured to selectively drop the link state advertisement if the link state advertisement is not likely to be relevant to another router on the network (using LSA status, see ¶.43 and 45; also see ¶.10-12)."

10. Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Kwiatkowski et al. (US 2004/0120355, "Kwiatkowski").

**Regarding claim 7,** Li discloses the method of limiting the dissemination of LSA within a predefined range such that not every router/node receives every LSA (see a predetermined distance, see ¶.43 and ¶.45) using OSPF protocol (¶.6), but does not

explicitly disclose the limitations of “a plurality of OSPF routers interconnected in a network and belong to an OSPF area.” However, Kwiatkowski discloses “a plurality of OSPF routers interconnected in a network (OSPF routers, see fig.1 and ¶.16) and belong to an OSPF area (multiple areas, see ¶.17).” Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the OPSF area configuration method disclosed by Kwiatkowski into the LSA flooding method within a predefined distance in order to preventing over flooding of LSA messages to every router and also with the motivation of standard compliance.

Regarding claim 8, Li discloses, “an ad-hoc wireless mesh network (ad-hoc, see ¶.3).”, but lacks what Kwiatkowski discloses, “the plurality of OSPF routers are interconnected (fig.1 and ¶.17).” This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 9, Li discloses, “wherein the network is configured such that LSAs are disseminated only a predefined distance (¶.43), but lacks what Kwiatkowski discloses, “within the OSPF area (¶.17).” This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 10, Li lacks what Kwiatkowski discloses, “wherein a subset of the OSPF routers are focal nodes (border nodes in fig.1).” This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.



Regarding claim 11, it is a claim corresponding to claim 9 and is therefore rejected for the similar reasons set forth in the rejection of claim 9.

Regarding claim 12, Li lacks what Kwiatkowski discloses, "wherein the predetermined distance is selected such that each LSA is received by at least two focal nodes (106 & 107 as shown in fig.1)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 13, Li lacks what Kwiatkowski discloses, "wherein nodes on the network other than focal nodes are configured to maintain a routing table containing information obtained from LSAs, the routing table containing information associated with at least two focal nodes (routing table ...topology, see ¶.14)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 14, Li lacks what Kwiatkowski discloses, "wherein the focal nodes are area border routers to an OSPF backbone area (106 & 107 as shown in fig.1)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 15, Li discloses, "configured to disseminate link state information for nodes in their local area, their local area being defined as that portion of the network from which the focal nodes receive LSAs (¶.43 and ¶.45)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

***Response to Arguments***

11. Applicant's arguments filed 11/13/2007 have been fully considered but they are not persuasive.

At page 7, applicant argues that Li fails to disclose, "based on the distance information without regard to an identity of a network element that initiated the link state advertisement." as recited in the amended claim 1.

In reply, Li discloses that LSA is distributed based on the distance information of S value which is not related with an identity to a network element. Therefore, the examiner respectfully disagrees.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Contact Information**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jung Park  
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